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Brake Lining Selection

A Fleet Operator's Perspective

S.6

Operations

- Vehicle Leasing
- Contract Maintenance
- T & M Maintenance
- Truckload Carrier - Northeastern U.S.

Vehicle Types

- School Buses with Air Brakes
- Straight Trucks - 4 x 2
- Straight Trucks - Vocational
- Tractors - Single Axle
- Tractors - Tandem Axle
- Tractors - Vocational

All of these vehicles use 16.5" x 7" drive axle brakes

One Lining Does Not Fit All

- Operational Terrain
- Gross Axle Weights
- Operator's Preferences

Should OEM Specs Be Used?

- OEM's build standard specs
- Users do not have standard specs

A 33,000# chassis with a van body hauling fabricated sheet metal has different brake needs than the same chassis equipped with a refrigerated body. OEM's can't anticipate all the possibilities.

Brake Performance Target SAE J1854

- A 17,000# to 20,000# axle should produce 4,600# of brake force at 40 PSI of application air pressure
- This is a brake force/weight ratio of 29% to 23%
- A steer axle should produce a brake force/weight ratio of 25%
  eg. 3,000/12,000 = 25%

RP 628 How Does It Relate to J1854?

- RP 628 values are for 1 wheel and expressed in in/lbs
- J1854 values are two wheels and expressed in brake torque
- Divide J1854 by 2 and multiply tire rolling radius - 4600# / 2 x 19 = 43,700 in/lbs per wheel

Calculations @ 25%

1 - Single axle daycab @ 20,000# GAW
20,000# x .25 = 5,000# / 2 x 19 = 47,500#

2 - Tandem axle daycab @ 17,000# GAW
17,000# x .25 = 4,250# / 2 x 19 = 40,375#

3 - Tandem axle tractor @ 23,000# GAW
22,000# x .25 = 5,500 / 2 x 19 = 52,250#